What is claimed is:

1. A tapered optical fiber bundle, comprising:

a plurality of input fibers formed into a fiber bundle, the fiber bundle being adiabatically tapered, and heavily-fused into an induced cross-sectional shape with minimally deformed cores and no interstitial space between the input fibers.

2. The tapered optical fiber bundle of claim 1, wherein the input fibers are any of multimode, single mode, multiclad and cladding pumped fibers.

3. An optical fiber device, comprising:

a tapered fiber bundle having a plurality of input fibers, adiabatically tapered, and heavily-fused into an induced compact shape with minimally deformed cores and no interstitial space between the input fibers at a cleaved end; and

an output element coupled to the cleaved end.

4. The optical fiber device of claim 3, wherein the output element is another tapered fiber bundle.

5. The optical fiber device of claim 3, wherein the output element is a single optical fiber.

6. The optical fiber device of claim 5, wherein the single optical fiber is a multimode optical fiber.

7. The optical fiber device of claim 6, wherein at least one of the input fibers is terminated to reduce back reflections.

8. The optical fiber device of claim 5, wherein the single optical fiber is a double clad fiber.

9. The optical fiber device of claim 5, wherein the single optical fiber is pre-tapered.

10. The optical fiber device of claim 3, wherein the output element is fusion spliced to the cleaved end.

11. The optical fiber device of claim 9, wherein a spliced junction between the tapered fiber bundle and the output element is post-tapered.

12. The use of the optical fiber device of claim 3 as any one of an optical combiner, an optical splitter, a cladding-pumped fiber laser, and a cladding-pumped optical amplifier.

13. A method of manufacturing an optical fiber device, comprising:

(i) positioning a plurality of optical fibers in a predetermined configuration for forming an optimized encircling radius;

(ii) bundling the positioned plurality of optical fibers while controlling the tension applied on individual fibers to result in a fiber bundle with minimized overall diameter;

(iii) heating and pulling the fiber bundle to heavily fuse the fiber bundle in an adiabatically tapered region into an induced shape with no interstitial space between fibers.

14. The method of claim 13, further including twisting the positioned plurality of optical fibers.

15. The method of claim 13, wherein positioning further includes bonding the plurality of optical fibers with an adhesive to secure their positions before fusing and tapering.

16. The method of claim 13, further including cleaving the bundle at the tapered region.

17. The method of claim 16, where the cleaved end of the bundle is reshaped into a desired cross-section by, at least once, fusion splicing the cleaved end to an optical fiber to match its cross-sectional geometry, and re-cleaving the optical fiber bundle .

18. The method of claim 16, further including coupling the cleaved end to an optical system.

19. The method of claim 16, further including fusion splicing the cleaved end to one of a single optical fiber and an output tapered fiber bundle.

20. The method of claim 19, further including pre-tapering of the single optical fiber.

21. The method of claim 19, further including post-tapering of a junction between the tapered fiber bundle and the one of the single optical fiber and the tapered fiber bundle.

22. The method of claim 13, further including at least partial removal of cladding from the plurality of optical fibers.

23. The method of claim 19, further including at least partial removal of cladding from the one of the output optical fiber and the output tapered fiber bundle.

24. The method of claim 19, further including re-coating at least part of a junction between the tapered fiber bundle and the one of the output optical fiber and the output tapered fiber bundle with a coating material.

25. The method of claim 24, wherein the coating material is one of polymer and metallic coatings materials.

26. The method of claim 19, further including heating of the one of the single optical fiber and cladding pumped fiber to diffuse its core to improve the transfer of light from a corresponding singlemode fiber in the input bundle.

27. A star coupler, comprising:

a tapered fiber bundle formed in the midsection of a plurality of fibers, adiabatically tapered, and heavily-fused into an induced compact shape with minimally deformed cores and no interstitial space between the fibers, such that the plurality of fibers form input and output leads on each side of the fused bundle.

28. The star coupler of claim 28, wherein at least one of the input leads is terminated to reduce back reflections.